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PACIFIC TELESIS
Group-Washington

ORIGINAL
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

July 6, 1992

Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Ms Searcy:

Re: *ET Docket No. 92-9 - Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*

On behalf of Pacific Telesis Group, please find enclosed an original and six copies of its "*Reply Comments*" in the above proceeding.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

William F. Adler

Enclosures

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List A B C D E

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies	)	ET Docket No. 92-9

REPLY COMMENTS OF PACIFIC TELESIS GROUP

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Date: July 6, 1992

TABLE OF CONTENTS

SUMMARY

The Telesis balanced approach to the issues raised in this proceeding best protects the interests of current spectrum users and new service providers.

Telesis supports the use of the 1850-1990 MHz bands for new services, but other bands should also be considered. The common carrier 2 GHz bands should be held in reserve. New rules are needed for the proposed relocation bands (4, 6 and 11 GHz) and for the bands targeted for new services.

The Telesis transition plan creates the right economic incentives, protects current users, enables new service providers to obtain spectrum, and discourages speculation. Under this plan, the new service provider must cover all costs to the current users of accommodating the new service (such as costs of methods to facilitate spectrum sharing or costs of relocation to other bands or other media). This plan is in the public interest and should be adopted.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies	)	ET Docket No. 92-9

REPLY COMMENTS OF PACIFIC TELESIS GROUP

Pacific Telesis Group ("Telesis") has studied the comments filed by over 150 parties with an interest in the Commission's spectrum reallocation proposals. These parties express many disparate points of view, ranging from demands that spectrum be rapidly made available at no cost to the new service provider to claims that the vital tasks performed by existing point-to-point microwave facilities require these facilities to remain unchanged. We believe that the suggestions made in our opening Comments provide the best balance between the interests of current users and new service providers, particularly our proposal that current users be required to accommodate the needs of new service providers if all their costs of accommodation are covered. Our suggestions best meet the concerns which commenters have expressed about the Commission's proposal, as we explain below.

I. THE TELESIS BALANCED APPROACH PROTECTS CURRENT USERS AND ENABLES NEW SERVICE PROVIDERS TO OBTAIN SPECTRUM

The comments of some equipment vendors and potential new service providers ignore the rights and needs of current users, and the public interest of their customers. For example, AT&T's radical proposal (that a lottery be held and that all current licenses expire in 3 to 5 years) provides no protection for current users. Since the lottery process cannot possibly be completed by 1995, those who win the lotteries will simply wait and take over the spectrum, without paying anything to the current users. In an even more extreme filing, IEEE Local Area Network Standards Committee ("IEEE Committee") recommends that a large portion of spectrum be completely cleared, without any payment to existing users, over a two-year period. The IEEE Committee shows a complete disregard for the needs of current users and the vital services they provide.

On the other hand, some current users do not agree that the targeted spectrum is needed for new services. The comments of Central Power and Light Company ("Central Power") are typical; it suggests that other spectrum be found for new services, to avoid any disruption or interference to current users in the 1850-2200 bands. Central Power Comments at 2.

The Telesis approach is balanced and protects the interests of both groups. New services can readily be provided under the Telesis proposal, because the current users are required to accommodate the needs of the new service providers,

either by making changes to their current use (such as the changes which Telesis Technologies Laboratory has found will promote sharing, as explained in our Comments at 8-11) or by relocating to different spectrum or a different medium. At the same time, the rights of current users and the vital services they provide to their customers are fully protected, because all costs of accommodating the new service providers must be covered.

Several commenters supported approaches which are similar to ours. First, there was widespread agreement among current users, even those who opposed the Commission's entire concept, that full compensation should be paid to anyone forced to relocate. See, e.g., the following Comments: Central Power at 3; American Petroleum Institute at 31; Telephone and Data Systems at 8; USTA at 4-5. Others also supported compensation for current users; for example, Rolm stated that, when it is necessary to migrate fixed services, the PCS beneficiaries should be responsible for reimbursing the incumbents for their incurred costs (Rolm Comments at 19), and Cylink stated "the cost of relocation would be borne, of course, by the PCS licensee(s) that benefits from the relocation." (Cylink Comments at 5).

Second, several parties embraced the concept of a relocation plan, which the current user would have to accept before being required to move. See the Comments of Utilities

Telecommunications Council ("UTC") at 77-79; Ameritech Comments at 11.

Third, many emphasized that adequate notice must be given before anyone could be forced to relocate. This, of course, is inherent in the Telesis proposal, since the relocation plan would necessarily include a timetable for moving. See the Comments of National Telecommunications and Information Administration ("NTIA") at 16, Ameritech at 11, United Telephone Companies at 6-7, and Rolm at 17-18.

Finally, several parties, including Central Power (at 3) and U S West (at 12-13), recommended that disputes should be submitted to arbitration.

II. THE 1850-1990 SPECTRUM BANDS SHOULD BE MADE AVAILABLE FOR NEW SERVICES, BUT OTHER BANDS SHOULD ALSO BE STUDIED

Use of the 1850-1990 MHz spectrum bands for new services was widely supported. Several parties (for example, McCaw at 18-19, Telesciences at 5-9, 14-18, and Telocator at 13) agreed with the Telesis suggestion that the common carrier bands (2100-2200 MHz) are not as suitable for relocation as the other bands, and should be held in reserve at this time. The 1850-1990 MHz bands appear to provide sufficient capacity for the proposed new services, and adjacent government spectrum may become available. Therefore, the common carrier bands--which are being more efficiently used than the 1850-1990 MHz bands--should be held in reserve.

A. Common Carrier Bands Should Not Be Used For Satellite Services

Telesis opposes the COMSAT proposal to use the common carrier bands for Mobile Satellite Services ("MSS"). COMSAT claims that MSS can share this spectrum with the existing common carrier users (COMSAT Comments at 18), but Telesis agrees with GTE that the feasibility of this type of sharing has not been proven. (GTE Comments at 25) Several parties (for example, AMSC Subsidiary Corporation at 8) present convincing cases that such sharing is not feasible. Furthermore, as Ericsson points out, satellite service is not an efficient use of spectrum. See discussion infra at 8-9.

If, however, the Commission decides to permit some MSS use of common carrier spectrum, as provided in WARC 92, then the MSS vendors should be treated like any other new service provider. Consistent with the Telesis proposal, they should be required to pay current licensees their costs of moving or otherwise accommodating the MSS use. One method for doing this would be to have the satellite provider(s) set up a central bureau for relocation of common carriers; it might be possible to move some common carriers to other portions of the common carrier bands, which would be less costly than other relocations. In short, satellite vendors should not be exempted from covering the costs incurred by current users who must relocate.

B. Use Of Government Spectrum Bands Should Be Studied

Telesis agrees with the suggestion, made by numerous parties, that the adjacent government bands require further study. If the government use is predominantly rural, as several parties state, these bands could be used for relocation of existing 2 GHz fixed microwave users in urban environments with little, if any, interference to current government use. See, for example, the comments of Rose Communications at 16. Cylink points out that moving current users to the adjacent government bands would be much less expensive than moving them to the 4, 6 or 11 GHz bands proposed by the Commission (Cylink Comments at 6).

C. Use Of Bands Below 1 GHz Should Be Considered

Other parties point out that some new Personal Communications Services could be provided in bands below 1 GHz. Ericsson, for example, suggests that in-building services could be provided at 940-41 MHz. (Ericsson Comments at 6) Interstate Natural Gas Association of America ("INGAA") suggests that two significant blocks of lightly used UHF-TV spectrum in the range 512-608 MHz and 614-806 MHz could offer an excellent spectrum home for new technologies. (INGAA Comments at 3) Telesis agrees that the Commission should carefully consider all possible locations for the many distinct PCS proposals.

III. NEW RULES ARE NEEDED FOR THE 4, 6 AND 11 GHZ BANDS

Telesis supports the need for new rules for the higher spectrum bands expressed in Alcatel's Petition for Rule Making, although we have some specific concerns regarding the suggestions for the common carrier bands; see our Comments in the Alcatel Rule Making Proceeding, filed July 2, 1992. Detailed new rules regarding channelization, loading, and other matters must be promulgated before the current users of the 1850-1990 MHz bands can be required to move to the higher bands. Telesis believes that Alcatel has raised important issues. Other parties who discussed the need for changes in the rules for the higher bands include COMSEARCH at 5-8, CTIA at 5, GTE at 15-16, Hughes at 1-3, MCI at 2, and the Telecommunications Industry Association at 1-2.

IV. NEW RULES WILL BE NEEDED ALSO FOR THE 1850-1990 MHZ BANDS

New rules will also be needed for the 1850-1990 MHz bands before they can be used for new services. The bands must eventually be partitioned, so that there can be separate spectrum allotted to such specific uses as "Part 16-like" non-licensed use, data and satellite.

Various commenters have proposed many different spectrum allocations. Indeed, if all these proposals are added together, the total far exceeds the amount of spectrum being considered in these proceedings. For example, several parties propose an allocation of spectrum for "Part 16-like"

non-licensed services: McCaw (Comments at 22-23), Rolm (Comments at 9), SpectraLink (Comments at 3-4), Rose Communications (Comments at 6), and WIN Forum (for "User-PCS," Comments at 3). Mr. Rypinski proposes an allocation for high rate data, and the IEEE Committee suggests an allocation for wireless LANs. AMSC Subsidiary Corp and COMSAT propose specific satellite allocations (see discussion above concerning COMSAT's claim that satellite users can share spectrum with common carrier users). Interactive Technology, Inc. supports protected bands for security and life safety uses. Motorola proposes private PCS system licenses, with partitioning for both private and public systems (Motorola Comments at 29).

Moreover, some parties have proposed elaborate schemes for partitioning these bands (see, for example, the proposals of International Mobile Machines (Comments at 7) and Ericsson (Comments at 6). Telesis does not believe that enough is known about the possible uses of these bands or about how much spectrum would be required for each use to permit a definitive partitioning scheme at this time. Furthermore, any partitioning scheme must include a reserve for unanticipated changes in demand or technology; our proposal that common carrier bands be held in reserve satisfies that need. Thus, while new rules about partitioning and other matters will eventually be needed, we suggest further study is required.

Ericsson makes an interesting suggestion that the rules should define spectrum efficiency and only award licenses

to those that reached a certain level of efficiency. (Ericsson Comments at 3-4) For example, Ericsson states that satellite systems are inherently much less efficient than other proposed new service uses, and therefore should not be awarded a large amount of spectrum. We agree with both of Ericsson's points. The inherent characteristics of satellite service makes it much less efficient in its use of spectrum. The Commission should take spectrum efficiency into account in awarding PCS licenses.

In fact, the Telesis transition plan rewards spectrum efficiency by encouraging spectrum sharing, as discussed below. Since the new service provider must pay the costs of existing users to accommodate the new use, the new provider is given an incentive to make full use of empty spectrum, and to take advantage of sharing techniques.

V. THE TRANSITION PLAN PROPOSED BY TELESIS SHOULD BE ADOPTED BECAUSE IT CREATES THE RIGHT ECONOMIC INCENTIVES

We will show in this section how the Telesis transition plan best meets the objections of various commenters to the Commission's proposed plan.

A. The Telesis Plan Covers The Entire Cost Of Accommodating The New User

Under the Telesis proposal, a new service provider would be required to present a plan to the current user describing any changes to be made in that user's system, ranging from re-engineering or facilities changes to relocation in other bands. When the parties had agreed to the plan, the

new service provider would pay all costs involved. However, the new service provider would only have to replicate the current user's present system. The current user would not be entitled to new features, such as a digital system instead of an analog one, or any other upgrade, unless the extra cost was paid. Thus, there would be no windfalls to current users. (Possibly, systems improvements could be offered to health and safety providers, such as local government agencies, in recognition of their important role.)

We believe that our proposal best serves the public interest, because the vital services provided by current users are fully protected. Any plan that would not cover the costs for current users is not in the public interest, because it would not protect these vital services. The important services provided to the public by these current users have been well-documented in their filings.

It is important that all costs be covered, so that all current users will be made whole. Caps on payment, as suggested by Rochester Telephone Company at 2-3, would not be in the public interest. Some current users will be very expensive to move, because of long path lengths, environmental concerns, need for new repeaters, engineering costs, etc. It would not be good public policy to put an artificial cap on payment which might deprive these current users of full cost coverage, simply because they had long path lengths or other characteristics making relocation expensive.

Many note, as Telesis did, that the Commission's estimate of the cost to relocate is far too low, primarily because it did not include substantial costs such as additional equipment, additional sites, engineering, and compliance with regulations. See, for example, the Comments of Centel at 17-21, CTIA at 4, GTE at 17-18, INGAA at 7-8, and Union Telephone Co. Only Tel/Logic stated that the Commission's estimate was high (Tel/Logic Comments at 3-4), and Tel/Logic is not a current user. We submit that current users, facing these costs under the Commission proposal, have made a more complete and careful examination of these costs than Tel/Logic.

The beauty of the Telesis plan is that it leaves the cost question up to the parties most directly involved, the new service provider and the current users. The Telesis plan gives the new service provider every incentive to seek the least expensive way to offer the new service, whether by sharing spectrum, by helping the current users to modify their current use and facilities, or by moving them to different spectrum. The parties are required to negotiate the cost issues in good faith, with disputes submitted to binding arbitration. The Commission need not become involved in these issues.

B. The Telesis Plan Protects The Interests Of Those With Extended Links In Rural Areas

Many rural fixed point-to-point users are very concerned about being forced to move when new services may never be offered in their areas. They point out that they

provide vital services (for example, gas pipeline monitoring; rural telecommunications; electric system monitoring and control) and that there are significant reasons why the higher frequency bands and fiber optic cables are not appropriate substitutes for their current facilities. In addition, they note that demand for the new services is unknown and is unlikely to be great in rural areas. See, for example, the comments of GTE at 13-14; USTA at 5; Cylink at 5. These points are well-taken. Indeed, Telesis's subsidiaries, Pacific Bell and Nevada Bell, share these concerns, because they operate key microwave links in remote portions of California and Nevada that would be difficult, if not impossible, to relocate.

Under the Telesis plan, these rural microwave users would be fully protected. They would not have to move or make any changes in their facilities until a reasonable plan was offered and their expenses were paid. This would insure that rural users would not have to move prematurely. The new service provider would have a financial incentive (especially in view of the high cost of moving these lengthy paths) not to require the current users to move until no other solution could be found, and until the demand for the new services justified the expenditure.

C. The Telesis Plan Encourages Cost-Effective Behavior

Under the Telesis plan, sharing and other inexpensive methods of accommodation are encouraged. One particular cost-effective method of accommodating new services was suggested in

several comments: aggregation of current users in one portion of the band. This would be far less expensive than moving them to the higher bands; the changes in equipment and engineering that would be required would be minor. See the Comments of USTA at 5 and GTE at 14. A similar point was made by Cylink when it noted that the adjacent government spectrum should be used for current users, since moving to this band would be less costly (Cylink comments at 6). When demand increases and more clear spectrum is needed, the current users would then be relocated--not before. By requiring new service providers to cover the costs of moving, incentives are provided to this and other cost-effective solutions to the need for spectrum.

Under the Telesis plan, in any given license area, the clearest spectrum will be the cheapest to use for a new system and will be used first. Under other proposals, the new service provider will have no incentive to use the less crowded spectrum first, since the new provider will not bear the cost of clearing the spectrum (once the deadline to lose co-primary status has passed).

Some have proposed that the shortest paths be moved first. (For example, see Rolm Comments at 17.) Again, the Telesis proposal encourages this result, since the shortest paths will be the least costly to convert to higher frequencies or fiber optic cable.

Centerior proposed that remuneration be based on conversion to fiber optic cable, because of its reliability.

(Centerior Comments at 5) Telesis opposes this suggestion. Fiber optic should only be selected where it is economic to do so. In urban areas, for short paths, such a conversion might well be the least costly choice. However, this will certainly not be the case for the longer paths used in rural areas, and many spread-out urbanized areas as well. Moreover, environmental concerns preclude the use of fiber optic cable in many areas. The Telesis plan provides incentives to select the most cost-effective relocation plan.

In contrast to the Telesis plan, any fixed schedule for movement, without requiring that costs be paid, creates the wrong incentives. Current users may have to move even if there is no demand for new services in their area; everyone has to move even if only part of the spectrum is needed. The true costs of clearing the spectrum are avoided just by waiting, which is a windfall to the new provider. There is no incentive, after the deadline has passed, to use the emptier spectrum first, or to aggregate current users, or use sharing techniques.

D. The Telesis Plan Minimizes Speculation

The Telesis plan discourages spectrum speculation, because those obtaining licenses will have to accommodate or relocate existing users. They will not obtain a valuable resource without bearing any of the costs of making that resource available. Any plan that does not cover the costs for current users encourages speculation, because it provides an

unfair windfall to the new service provider; the new service provider would obtain clear spectrum without paying the true costs of clearing the spectrum. Speculators will be encouraged to seek licenses, because for a minimal payment they may obtain a valuable asset.

Other parties have made other good suggestions for discouraging speculation. For example, BellSouth and AT&T suggest that new service providers be required to build an operating system in a given time period (BellSouth at 7; AT&T at 8). Telesis supports these proposals, which are not inconsistent with its transition plan.

VI. CONCLUSION

For the reasons stated, the Telesis transition plan best protects the interests of current users and new service providers, gives the appropriate economic incentives, and

discourages speculation. The Commission should adopt the Telesis proposed transition plan.

Respectfully submitted,

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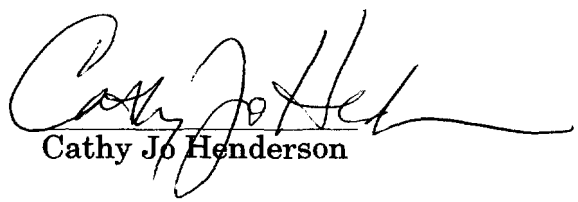
Date: July 6, 1992

CERTIFICATE OF SERVICE

I, Cathy Jo Henderson, hereby certify that a copy of the foregoing Reply Comments of Pacific Telesis Group was mailed first-class United States mail, postage prepaid, this 6th day of July, 1992 to the parties listed on the attached service list.



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